tekmar®

tekmarNet® Thermostat 552

User Manual

Zoning

U552
08/11
Replaces: New

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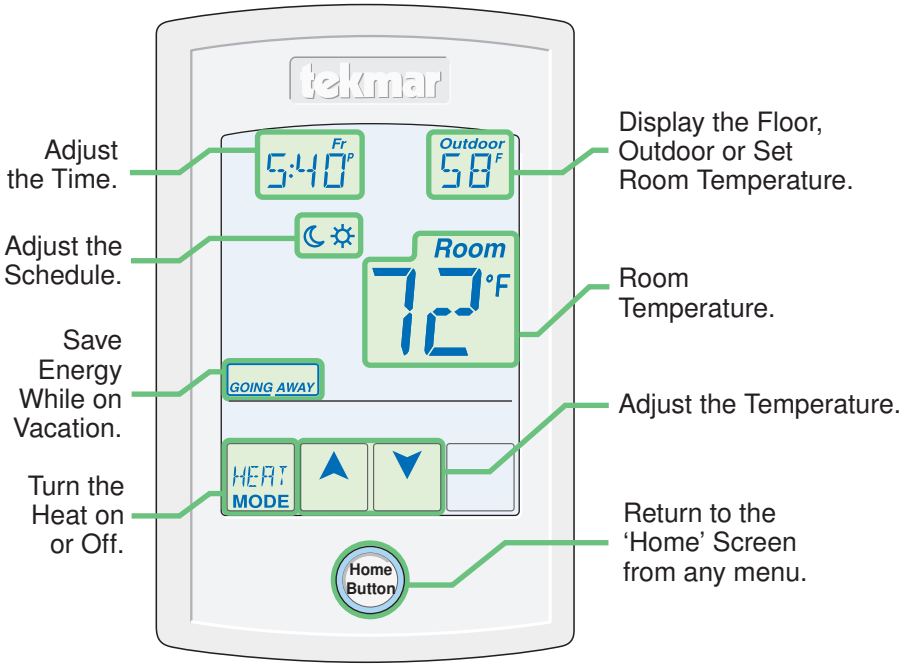
This brochure will provide you with the information you need to benefit the most from your tekmarNet® thermostat. Please visit www.tekmarcontrols.com for more detailed information on this or any other tekmar product.

This thermostat provides heating for one zone in your building. It will maintain your air temperature with an on board room sensor. Floor temperature control may also be enabled in this thermostat when a floor sensor is installed. This thermostat can lower its temperature setting at night or when you are away from the house.

Touchscreen Adjustments

The touchscreen of this thermostat makes it easy to change commonly used settings. Touch any item to adjust it's setting. You will hear a "tick" sound each time you touch the display. When you are finished making changes, touching the home button will return to the home screen. If you do not touch the screen for 3 seconds, the home screen is automatically displayed.

tekmarNet® Thermostat 552 Home Screen



Display of the time, schedule and the away key on the home screen is optional and can be turned on or off in the programming menus.

To enter the programming menus, press and hold the Home button for 3 seconds.

Display Symbols

This thermostat will display symbols on its screen in order to indicate what mode it is in, what temperature it is operating at, or what equipment it is trying to turn on. This section describes each of those symbols.

Heat On	**HEAT ON** Heat is turned on.
	SUN Operating at the occupied (day) temperature.
	MOON Operating at the unoccupied (night) temperature.
	tekmarNet® Communication is present.
	WARNING SYMBOL Indicates an error is present.
	ARROWS Adjust the displayed setting.
SCENE AWAY	**SCENE AWAY** Operating at Away temperature.
HOLD 3hr	**TEMPORARY HOLD** Hold for 3, 6, 9 or 12 hours.
WWSD	**WWSD** The outdoor air temperature is above the Warm Weather Shut Down setting which shuts off the boiler for heating.
COOL	**COOL** Radiant floor cooling system is on.
MIN or MAX	**MIN or MAX** Reached the room minimum or maximum.
MIN FL or MAX FL	**MIN FL or MAX FL** Reached the floor minimum or maximum.

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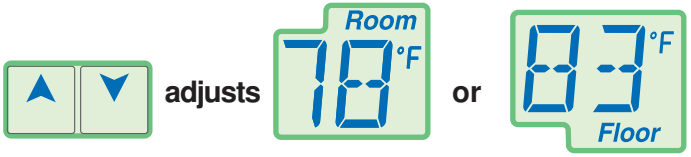
Adjust the Temperature

To change the set temperature, touch the ▲ or ▼ arrows to select a preferred temperature setting. Press the home button to accept the setting or leave the screen untouched for several seconds. This thermostat is capable of controlling the floor or air temperature. When set to control the floor temperature alone, the large display will say “Floor” instead of “Room”.

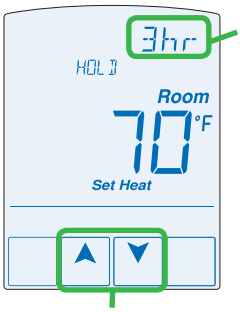


Note: The temperature is not adjustable if the thermostat is in the Away scene, the Off mode or has been set to the “Limited” or “Secure” access level by the installer.

Adjust the Temperature - Temporary Hold

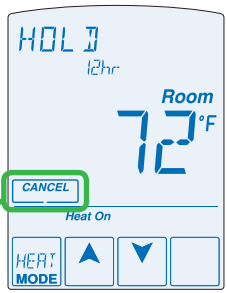
Temporary hold allows a user to change the temperature for a period of time and then automatically return to the permanent temperature setting. This is especially useful in commercial buildings that are in use for short amounts of time. When selected, touching the up or down arrows changes the temperature for either 3, 6, 9 or 12 hours. If the thermostat is using a schedule, ‘Schd’ provides a temporary hold until the next schedule event time. After the temporary hold time expires, the thermostat returns to normal operation. By default, the temporary hold feature is off.

When the temporary hold feature is enabled, touching the up or down arrow displays ‘TEMPORARY HOLD’.



Tap the hour setting until the preferred length of time is displayed.

Use the Up or Down arrow to select a temperature.



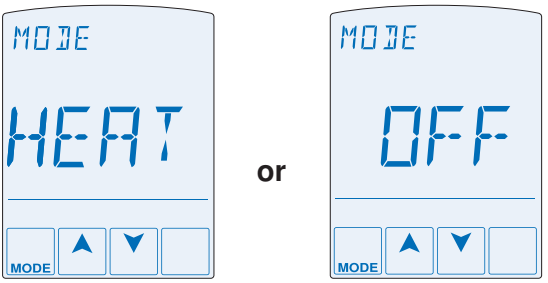
Cancel the temporary hold.

‘HOLD’ is displayed while the thermostat is operating at the temporary hold temperature.

Mode Heat or Off

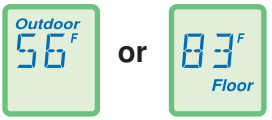
Heating operation can easily be turned off by selecting the “Off” mode. Touch the Mode key on the screen to change between Heat and Off. The temperature is not adjustable while the thermostat is off.

Note: If near freezing temperatures are detected the system will operate to maintain 40°F (4.5°C), even in the Off mode.



Secondary Temperature Display

This thermostat can display the outdoor, floor or room set temperature in the smaller number area at the top right of the screen. To toggle the item currently displayed, touch the secondary temperature. Display of the floor or outdoor temperature requires a connection to an external floor or outdoor air sensor.



Adjust the Time

To change the current time, touch the clock on the display.

- Use the ▲ or ▼ arrow to change the minutes, hour and day.
- Touch “NEXT ITEM” to advance to the next item or “BACK” for the previous item.
- To store the new time and date, press the home button, or leave the screen untouched for several seconds.

Note: The time is not visible when the thermostat is in the Away scene or if the clock display is turned off in the Time menu.

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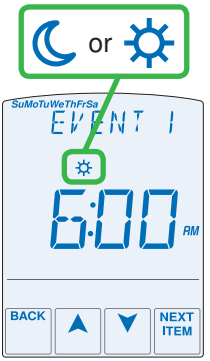
Programmable Schedule - Day ☼ and Night ☾

This thermostat is capable of running at a lower temperature setting when you are asleep or out of the building. When the schedule setting is on, day ☼ and night ☾ temperature settings will display on the screen. If you adjust the temperature while the sun is displayed, the day setting changes. If you adjust the temperature while the moon is displayed, the night setting changes.

To adjust the times when the day and night temperature start, touch the sun ☼ or moon ☾ on the screen. “Schedule Menu” will display followed by the first adjustable schedule event time.

- Use the ▲ or ▼ arrow to adjust the time for each event.
- Touch ‘NEXT ITEM’ to advance to the next event or ‘BACK’ for the previous event.
- To accept the settings, press the home button, or leave the screen untouched for several seconds.
- This thermostats schedule can be set to 2 or 4 events per day repeating on a 24 hr or 7 day cycle. These schedule settings are detailed later in this brochure.



Going Away Setting

This thermostat can save additional energy while you are away by operating at a lowered temperature. To enable this feature, touch “Going Away” on the screen. This is only available when the Away Key has been turned on in the Scene menu.

- Select PERM (permanent) or a number of days using the ▲ or ▼ arrow.
- Press the home button to accept the setting or leave the screen untouched for several seconds.
- “Scene Away” is displayed on the home screen until the number of days expires.
- Touch “Cancel Away” to cancel at any time.

Note: The temperature is not adjustable while the thermostat is in Away.

Access Levels

This thermostat has access levels. It will typically be installed and programmed by a heating professional and then locked in a “User”, “Limited”, or “Secure” access level. System critical settings will not be available for adjustment. For more information on these settings, please consult your installing contractor or this product’s Installation and Operation Manual. This brochure focuses on settings available to the “User”.

Program Menu Settings

To Enter the Programming Menus

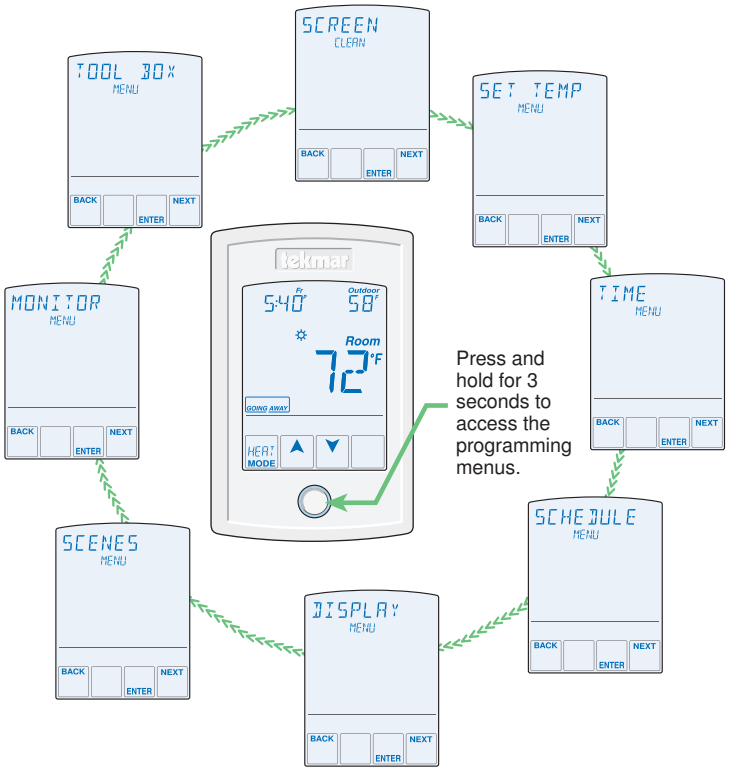
Press and hold the Home button for 3 seconds to enter the programming menus.

Select a Programming Menu

- Touch “NEXT” to advance (clockwise in the illustration below) to the next menu.
- Touch “BACK” to go backwards (counterclockwise in the illustration below) through the menus.
- Touch “ENTER” to enter a menu.

Setting Items

- Touch ▲ or ▼ arrow to adjust the setting if required.
- Touch “NEXT ITEM” to advance to the next item within the menu.
- Touch “BACK ITEM” to go backwards to the previous item within the menu.
- To return to the parent menu after changing a setting, press and release the home button.
- To return to the home screen, press and release the home button twice or wait 30 seconds to automatically return to the home screen.



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Screen Clean Menu

Entering the Screen Clean menu gives you 30 seconds to clean the thermostat and display with a moist cloth. Do not use solvents to clean the thermostat.

Set Temp Menu

Entering the Set Temp menu allows you to permanently change both the day ☼ and night ☾ temperature settings for the room and / or floor.

If your thermostat is being used for radiant floor heating, a floor sensor can be connected to it. Radiant floors heat the air by raising the floor temperature. Setting a floor temperature is a way of enhancing the comfort of your living space. There are two methods to operating the thermostat using a floor sensor.

Floor Temperature Only

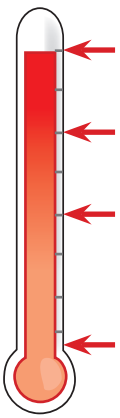
If the air sensor has been disabled, the thermostat will only maintain floor temperature and ignore air temperature. This operation is recommended for areas such as bathrooms to ensure that tile floors are warm to the touch.

Floor and Air Temperature

If the air sensor is turned on and a floor sensor is connected, the thermostat will maintain your desired air temperature as well as a minimum floor temperature.

This operation is recommended for areas with large windows that allow the sun to shine into a room and keep it warm without the need for heat. This can allow the floors to cool off during the afternoon. When the sun goes down, it can take a long time for the floors to get warm again. This may cause the room to cool off too much in the early evening. A floor minimum setting can help with this condition by maintaining a floor minimum temperature. Keep in mind the floor minimum temperature will override the air temperature, and if set too high, may overheat the room.

This operation is also recommended for rooms with hardwood floors. The floor maximum setting prevents damage to the wood floor from overheating.



90°F (32°C) Feels hot to the touch	Suggested maximum for all floor types other than wood.
80 to 85°F (26 to 30°C) Feels warm to the touch	Bathrooms and kitchens. Suggested maximum for wood floors.
70°F (21°C) Feels cool to the touch	Rooms with large windows preventing under heating in the evening.
40 to 45°F (5 to 7°C) Feels cold to the touch	Freeze protection for garages.

Time Menu Settings

Set date, month and year

Required for daylight savings time.

Daylight Save

Automatic daylight saving time update for the spring and fall.

Time Mode

Select either 12 or 24 hour time format.

Clock

Select on to display the time clock in the Home menu (available when schedules are not used).

Schedule Menu Settings

Lowering the room temperature setting reduces the amount of fuel required to heat the building resulting in energy savings.

When operating on a programmable schedule, a ☼ or a ☾ symbol is shown in the home menu. The ☼ or ☾ indicates the current operating temperature.

All schedules are stored in permanent memory and are not affected by a loss of power.

Display	Action
☼	Day temperature
☾	Night temperature

This thermostat can operate on a programmable schedule in order to automatically lower the room temperature setting. Options include:

- Turning off the schedule (OFF)
- Operate a schedule that applies only to this thermostat zone (ZONE)
- The ability to operate one of the four system-wide schedules as a master (Schedule Master 1 through 4*)
- Join one of the four system-wide schedules as a member (Schedule Member 1 though 4*)

*Requires the thermostat to be connected to a tekmarNet® system.

Once the type of schedule has been selected, the thermostat can support schedules that have either:

- 2 events per day
- 4 events per day

Schedules with four events per day are common for residential use while two events per day are common for commercial installations.

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Schedule Menu Settings (Continued)

The schedules can be repeated every:

- 24 hours
- 7 days (week)

A 7 day schedule allows a unique time to be set to change the temperature for each day of the week.

The schedule also includes a “SKIP” option that allows the programmable schedule to skip a temperature change and remain at the previous temperature setting. The “SKIP” setting can be found between 11:50 PM (23:50 hours) and 12:00 AM (0:00 hours).

When a programmable schedule is selected, there is a time delay for the room to warm up from the ☾ temperature to the ☼ temperature. The thermostat has the option to use Optimum Start to predict the heat up rate of the room. When Optimum Start is set to On, the heating is started in advance to allow the room to reach the Set Room ☼ temperature at the time set in the programmable schedule.

Display Menu Settings

Units

Select temperature units in degrees Fahrenheit or Celsius.

Backlight Options

Select how the display backlight operates.

- ON = The display is always at full brightness.
- DIM = When thermostat is not in use, the display is dim but is at full brightness when touched.
- DIM ☼ = When the thermostat is not in use, the display is dim while the schedule or scene is ☼. The display backlight is off when the schedule or scene is ☾. The thermostat display is at full brightness when touched.
- ON ☼ = When the thermostat is not in use, the display is at full brightness when the schedule or scene is ☼. The display backlight is off when the schedule or scene is ☾. The thermostat display is at full brightness when touched.
- OFF = The display backlight is always off.

Secondary Item

Select whether the outdoor or floor temperature is shown in the upper right hand corner in the Home menu.

Scene Menu Settings

Scenes

Scenes provide system-wide overrides to save energy. Select whether scenes are not used (none) or if the away scene is available.

Away Key

If scenes are available, select if the away key is available or not.

Note: When used in conjunction with a tekmarNet® system control to operate the heating appliance, the domestic hot water tank is not heated while in away scene.

Monitor Menu

The monitor menu allows you to view the following temperatures and running hours:

- Outdoor temperature highs and lows
- Room temperature highs and lows
- Floor temperature highs and lows (requires floor sensor to be installed)
- Heat W1 = Number of hours the thermostat is actively heating the room
- Cool W1 = Number of hours the thermostat is actively cooling the room (available in select radiant floor cooling installations)

To clear the temperature highs and lows or the running hours:

1. Touch the temperature or running hours.
2. Display will show "CLr?".
3. Touch Enter.

Toolbox Menu

This menu is provides advanced level information.

Access

Change the access level on the thermostat.

Status Info

Displays the current status of the thermostat including any overrides from the tekmarNet® system control. Toggles between "Status Info" and the current status.

- System Normal = Thermostat is operating normally.
- Override W1 = The tekmarNet® system control is either forcing the heating W1 relay on or off.
- Cooling Floor = Floor cooling is in effect.
- WWSD = Warm Weather Shut Down is in effect.
- Air Group Master Cool = Heating is off while the cooling system is on.
- Optimum Start = Heating is started early in order to meet ☼ temperature setpoint at Event 1 or Event 3.
- Floor Max = The floor has reached its maximum temperature. Some under heating could occur.
- Floor Min = The floor is operating at its minimum temperature. Some over heating could occur.
- Baseload On = Baseload heating is on even though the room temperature is satisfied. Reduces heat up time when the sun sets in the evening.

Software Version and Type Number

Display the software "SW" and the "TYPE" number.

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Frequently Asked Questions

Symptom	Look for...	Corrective Action
No heat	***Heat On***	***Heat On*** indicates heat is on. If the ***Heat On*** is displayed and there is no heat, contact your heating professional.
		The thermostat is in the Off mode. Touch the mode key to change to Heat.
No ▲ or ▼ key		Touch the 'Cancel Away' key on the display.
Heat on before scheduled time		Optimum Start is on and has turned on the heat in advance of your schedule change.
Touching ▲ key does not increase temperature	Flashing 	There may be a maximum room temperature set. Consult your heating professional.
	Flashing 	The floor has reached the floor maximum setting. Consult your heating professional.
	Flashing 	Warm weather shut down is in effect. Adjustable from your system control.
Touching ▼ key does not decrease temperature	Flashing 	There may be a minimum floor temperature set. Consult your heating professional.
	Flashing 	The floor has reached the floor minimum setting. Consult your heating professional.
	Flashing 	Floor cooling is in effect. Locate the heat-cool thermostat to set the cooling temperature.

More Information

This User Brochure contains standard information on how to make adjustments to an installed product. More detailed information can be found in this product's Installation and Operation Manual (D552) at www.tekmarcontrols.com

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